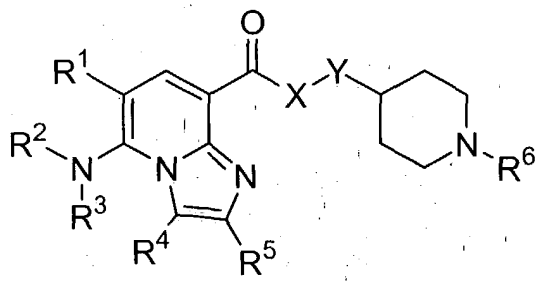
CLAIMS

1. A compound of the formula (I):



(I)

or the pharmaceutically acceptable salts thereof wherein

$\mathbf{R^1}$ is hydrogen, halo or C_{1-6} alkyl;

$\mathbf{R^2}$ and $\mathbf{R^3}$ are independently hydrogen, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, mono- or di-(C_{1-5})alkyl amino, amino(C_{1-5})alkyl or hydroxy(C_{1-5})alkyl; or R^2 and R^3 taken together with the nitrogen atom to which they are attached may form substituted or non-substituted nitrogen-containing hetrocyclic;

$\mathbf{R^4}$ is hydrogen, halo, C_{1-8} acyl, amino, amido, substituted or non-substituted aryl, substituted or non-substituted aryl(C_{1-6})alkyl, or substituted or non-substituted heterocyclic;

$\mathbf{R^5}$ is hydrogen, halo, C_{1-6} alkyl, C_{2-6} alkenyl, C_{2-6} alkynyl, C_{1-8} acyl, amino, amido, substituted or non-substituted aryl, substituted or non-substituted aryl(C_{1-6})alkyl, or substituted or non-substituted heterocyclic;

$\mathbf{R^6}$ is hydrogen, C_{1-6} alkyl or C_{1-6} alkoxy (C_{1-6})alkyl;

X is NR^9 wherein R^9 is hydrogen or C_{1-6} alkyl; and

Y is $(CR^7R^8)_n$ wherein $R^7$and R^8 are independently hydrogen or C_{1-6} alkyl, and n is an integer from 0 to 5.

2. A compound according to Claim 1, wherein

$\mathbf{R^1}$ is hydrogen, halo or C_{1-3} alkyl;

$\mathbf{R^2}$ and $\mathbf{R^3}$ are independently hydrogen, C_{1-3} alkyl, mono- or di-(C_{1-5})alkyl amino,

amino(C_{1-5})alkyl or hydroxy(C_{1-5})alkyl; or R^2 and R^3 taken together with the nitrogen atom to which they are attached may form substituted or non-substituted nitrogen-containing hetrocyclic;

R^4 is hydrogen, halo, C_{1-3} acyl, substituted or non-substituted aryl, substituted or non-substituted aryl(C_{1-3})alkyl, or substituted or non-substituted heterocyclic;

R^5 is hydrogen, halo, C_{1-3} alkyl, C_{1-3} acyl, amido, substituted or non-substituted aryl, substituted or non-substituted aryl(C_{1-3})alkyl, or substituted or non-substituted heterocyclic;

R^6 is hydrogen, C_{1-5} alkyl or C_{1-3} alkoxy (C_{1-5})alkyl;

X is NR^9; and **Y** is $(CR^7R^8)_n$, wherein R^7, R^8 and R^9 are independently hydrogen or C_{1-3} alkyl, and n is an integer from 0 to 3.

3. A compound according to Claim 1, wherein

R^1 is hydrogen or halo;

R^2 and **R^3** are independently hydrogen or C_{1-3} alkyl; or R^2 and R^3 taken together with the nitrogen atom to which they are attached may form hetrocyclic selected from morpholino, piperazino, piperidino, pyrrolidino, azetidino, pyrazolidino, (1,2,3,4)-tetrahydroisoqunolino and perhydroisoquinolino, which may be optionally substituted with halo, C_{1-3} alkyl, C_{1-3} alkoxy, mono- or di-(C_{1-3})alkyl amino or C_{1-3} alkoxy(C_{1-3}) alkyl;

R^4 is hydrogen, halo, C_{1-3} acyl, aryl selected from phenyl and naphthyl, arylalkyl selected from phenyl C_{1-3} alkyl and naphthyl C_{1-3} alkyl, or heteroaryl selected from piperidino, morpholino, thiamorpholino, pyrrolidino, pyrazolino, pyrazolidino, pyrazoryl, piperazinyl, furyl, thienyl, oxazolyl, tetrazolyl, thiazolyl, imidazolyl, imidazolinyl, pyrazolyl, pyridyl, pyrimidinyl, pyrrolyl, pyrrolidinyl and quinolyl, wherein said aryl, arylalkyl or heteroaryl may optionally be substituted with halo, C_{1-3} alkyl, C_{1-3} alkoxy, mono- or di-(C_{1-3})alkyl amino or C_{1-3} alkoxy(C_{1-3}) alkyl;

R^5 is hydrogen, halo, C_{1-3} alkyl, C_{1-3} acyl, amido, aryl selected from phenyl and naphthyl, arylalkyl selected from phenyl C_{1-3} alkyl and naphthyl C_{1-3} alkyl, or heteroaryl selected from piperidino, morpholino, thiamorpholino, pyrrolidino,

pyrazolino, pyrazolidino, pyrazoryl, piperazinyl, furyl, thienyl, oxazolyl, tetrazolyl, thiazolyl, imidazolyl, imidazolinyl, pyrazolyl, pyridyl, pyrimidinyl, pyrrolyl, pyrrolidinyl and quinolyl, wherein said aryl, arylalkyl or heteroaryl may optionally be substituted with halo, C_{1-3} alkyl, C_{1-3} alkoxy, mono- or di-(C_{1-3})alkyl amino or C_{1-3} alkoxy(C_{1-3}) alkyl;

$\mathbf{R^6}$ is C_{1-5} alkyl or C_{1-3} alkoxy (C_{1-5})alkyl;

X is NR^9; and **Y** is $(CR^7R^8)_n$, wherein R^7, R^8 and R^9 are independently hydrogen or methyl, and n is an integer from 0 to 2.

4. A compound according to claim 1, wherein

$\mathbf{R^1}$ is halo;

$\mathbf{R^2}$ and $\mathbf{R^3}$ are independently hydrogen or C_{1-3} alkyl; or R^2 and R^3 taken together with the nitrogen to which they are attached may form hetrocyclic selected from morpholino, piperazino and piperidino;

$\mathbf{R^4}$ is hydrogen, halo, C_{1-3} acyl, phenyl, naphthyl, benzyl, piperidino, morpholino, pyrrolidino, pyrazolino, pyrazoryl, piperazinyl, furyl, thienyl, oxazolyl, tetrazolyl, thiazolyl, imidazolyl, pyridyl, pyrimidinyl or pyrrolyl;

$\mathbf{R^5}$ is hydrogen, halo, C_{1-3} alkyl, C_{1-3} acyl, amido, phenyl, naphthyl, benzyl, piperidino, morpholino, pyrrolidino, pyrazolino, pyrazoryl, piperazinyl, furyl, thienyl, oxazolyl, tetrazolyl, thiazolyl, imidazolyl, pyridyl, pyrimidinyl or pyrrolyl;

$\mathbf{R^6}$ is C_{1-4} alkyl or C_{1-3} alkoxy (C_{1-4})alkyl;

X is NH; and

Y is chemical bond or methylene.

5. A compound according to claim 1, wherein

$\mathbf{R^1}$ is chloro;

$\mathbf{R^2}$ and $\mathbf{R^3}$ are independently hydrogen or C_{1-3} alkyl;

$\mathbf{R^4}$ is hydrogen or halo;

$\mathbf{R^5}$ is hydrogen, halo or C_{1-3} alkyl;

$\mathbf{R^6}$ is C_{3-4} alkyl or methoxy (C_{1-4})alkyl;

X is NH; and

Y is methylene.

6. A compound according to Claim 1 selected from

5-amino-*N*-[(1-butyl-4-piperidinyl)methyl]-6-chloroimidazo[1,2-*a*]pyridine-8-carboxamide;

5-amino-*N*-[(1-butyl-4-piperidinyl)methyl]imidazo[1,2-*a*]pyridine-8-carboxamide;

5-amino-6-chloro-*N*-[(1-(3-methoxypropyl)-4-piperidinyl]imidazo[1,2-*a*]pyridine-8-carboxamide;

5-amino-*N*-[(1-(3-methoxypropyl)-4-piperidinyl]imidazo[1,2-*a*]pyridine-8-carboxamide;

5-Amino-*N*-[(1-butyl-4-piperidiny)methyl]-6-chloro-2-methylimidazo[1,2-*a*]pyridine-8-carboxamide;

5-Amino-6-chloro-2-methyl-*N*-{1-[3-(methyloxy)propyl]-4-piperidinyl}imidazo[1,2-*a*]pyridine-8-carboxamide;

5-Amino-6-chloro-2-methyl-*N*-({1-[3-(methyloxy)propyl]-4-piperidinyl}methyl)imidazolo[1,2-*a*]pyridine-8-carboxyamide; and

salts thereof.

7. A compound according to claim 6 selected from

5-amino-*N*-[(1-butyl-4-piperidinyl)methyl]-6-chloroimidazo[1,2-*a*]pyridine-8-carboxamide;

5-amino-6-chloro-*N*-[(1-(3-methoxypropyl)-4-piperidinyl]imidazo[1,2-*a*]pyridine-8-carboxamide; and

salts thereof.

8. A pharmaceutical composition for the treatment or prevention of disease conditions mediated by 5-HT_4 receptor activity, in a mammalian subject, which comprises a therapeutically effective amount of a compound of Claim 1 and a pharmaceutically acceptable carrier.

9. A pharmaceutical composition for the treatment or prevention of gastroesophageal reflux disease, gastrointestinal disease, gastric motility disorder, upper gut motility disorder, non-ulcer dyspepsia, Functional dyspepsia, irritable bowel syndrome, constipation, dyspepsia, esophagitis, gastroesophageral disease, aausea, central nervous system disease, alzheimers disease, cognitive disorder, emesis, migraine, neurological disease, pain, ischaemic stroke, anxiety or cardiovascular disorder, which comprises a therapeutically effective amount of a compound of Claim

1 and a pharmaceutically acceptable carrier.

10. A method for the treatment or prevention of disease conditions mediated by 5-HT_4 receptor activity, in a mammalian subject, which comprises administering to said subject a therapeutically effective amount of a compound according to Claim 1.

11. A method for the treatment or prevention of gastroesophageal reflux disease, gastrointestinal disease, gastric motility disorder, upper gut motility disorder, non-ulcer dyspepsia, Functional dyspepsia, irritable bowel syndrome, constipation, dyspepsia, esophagitis, gastroesophageral disease, aausea, central nervous system disease, alzheimers disease, cognitive disorder, emesis, migraine, neurological disease, pain, ischaemic stroke, anxiety or cardiovascular disorder, which comprises administering to said subject a therapeutically effective amount of a compound according to Claim 1.

12. Use of a compound according to Claim 1 in the manufacture of a medicament for the treatment or prevention of disease conditions mediated by 5-HT_4 receptor activity, in a mammalian subject.

13. Use of a compound according to Claim 12, wherein said condition is gastroesophageal reflux disease, gastrointestinal disease, gastric motility disorder, upper gut motility disorder, non-ulcer dyspepsia, Functional dyspepsia, irritable bowel syndrome, constipation, dyspepsia, esophagitis, gastroesophageral disease, aausea, central nervous system disease, alzheimers disease, cognitive disorder, emesis, migraine, neurological disease, pain, ischaemic stroke, anxiety or cardiovascular disorder.